

Health of Home and School.

LEAFLET NO. 12.

ISSUED BY THE STATE BOARD OF HEALTH OF MAINE.

Infection Carriers.

The whole world of medical and of public health research is moving swiftly. It is rapidly discovering truths which are of the greatest value to us all about the causes of diseases, their prevention, and their cure.

One thing which has been brought out more clearly of late years is, that it sometimes happens that a person who appears to be well or only slightly sick, may carry the infection of dangerous diseases in his system and thus be a danger to other persons.

There are several ways in which this may happen:

1st. The person may have had, in its usual form, the disease which the particular kind of infection usually causes, and he may have recovered fully, but the infection (the germs of that disease) still continue to develop and multiply in his system. He is therefore still a source of danger to other persons.

2nd. A person has received into his system the infection. It multiplies and is given off freely, thus endangering other persons; but he himself remains in full health. He has no symptoms whatever.

3rd. A person receives the infection; that is, he becomes infected. But he has only slight symptoms and the disease is in so mild and irregular a form that there is difficulty in saying what the trouble is.

Thus the same kinds of infection received into the systems of different persons may produce symptoms of varying degrees of severity, or there may be a complete absence of symptoms.

So, in preventing the spread of infectious diseases, there is this newly-found danger to keep in mind. Aside from guarding against the spread of infection from persons sick with the plain forms of these diseases, and from the things and houses and places which they have infected, we must remember the possibility of these infection carriers. And that is a very serious danger. That accounts for many cases of infectious diseases which continue to spring up long after the health officer thinks that, according to the rules of the game, they should stop.

And now a few words about "infection carriers" for the several infectious diseases:

Diphtheria.

The germ of diphtheria (the infection, the diphtheria bacillus), finding its way into the throat or nose, multiplies, as the seed does which falls upon fertile soil with warmth and moisture to its liking. The germ may simply multiply and not make the person sick. It does not make him sick because he is *immune*, that is, he cannot take the disease even though he receives the infection. But he is an infection carrier. He is dangerous to other persons, though the infection is not dangerous to him.

Again, the diphtheria infection may grow and multiply and cause a slight sore throat, or quite a severe inflammation of the throat, which does not look like diphtheria. In these cases, the person with the sore throat is a dangerous infection carrier.

The third kind of diphtheria infection carrier is the person who has had diphtheria in its plain form and has recovered. He may appear to be entirely well, but the infection still lingers in his throat or in the cavities

of his nose. While it does, he, too, is a dangerous infection carrier of this terrible disease.

There are, thus, three kinds of diphtheria infection carriers. Persons may also, of course, carry the infection in their clothing or in other infected things.

It sometimes happens that cases of diphtheria keep springing up in a school or a community after every required precaution has apparently been observed. Such continued outbreaks are most likely due to an unrecognized mild case of diphtheria or a person who is a walking manufactory of diphtheria infection.

And how shall the person who is thus probably innocently spreading sickness and death be found out? It can only be done by sending to the laboratory samples from the throat on small swabs of sterilized cotton which have been applied to the throat and then enclosed in glass tubes. But this is work for the doctors and the health officers.

And only in the same way—by the help of the laboratory—can it be known, in many cases of throat disease, whether they are diphtheria or not; and in no other way can it be known how long the infection remains in the throat if it has been diphtheria.

It is much better for the public safety to have the period of quarantine depend upon the length of time the diphtheria infection remains in the throat and nostrils than to have a fixed period of quarantine, and it is better for the affected families generally, for, in all except a few exceptional cases, families may be released from quarantine earlier than under the other rule. The laboratory of the State board of health is continually doing work of this kind for local boards of health.

Typhoid Fever.

There are also typhoid infection carriers: persons who have the disease in a very mild form, who perhaps walk around meanwhile all the time spreading infection, and persons who, some weeks or months, or even years ago, had typhoid fever and continue, in their kidneys or intestinal canal, or gall bladder, to offer a favorable field of growth for the infection (the typhoid bacillus). The discharges from such a person endanger other persons in his household and in his neighborhood.

Scarlet Fever.

In scarlet fever, there are also infection carriers. There are cases of sore throat, sometimes very mild and sometimes somewhat severe, with no rash whatever, and still these attacks may be caused by the infection of scarlet fever. They are, in fact, cases of scarlet fever. These cases may spread infection which produces typical and malignant scarlet fever.

After the recovery from scarlet fever is apparently complete, a discharge from the nose or ear, or a continued sore throat may spread infection.

Cholera.

Just now, as this leaflet is in preparation, that dread disease, Asiatic cholera, has come to the Port of New York. Just a few cases have developed from infection carriers. Just as persons who have not had a plain attack of typhoid fever, or who have recovered from an attack, may spread typhoid fever, so may a person who has not had cholera or who has recovered from it continue to pass infection and spread the disease.

Tuberculosis.

A tuberculous patient is not a source of danger unless he is coughing up or otherwise discharging the infection of this disease. But there are many persons with a chronic cough who are spreading tuberculous infection without knowing that they have tuberculosis.

Keep these leaflets all together. Try to have a full set.

Health of Home and School.

LEAFLET NO. 13.

ISSUED BY THE STATE BOARD OF HEALTH OF MAINE.

To Save Life After Drowning, Electric Shock, and Other Accidents.

In drowning there are two things to be done, and to be done quickly: Empty the lungs of water, and restore breathing. Work quick and fast, and if need be, work long. One minute lost or saved may make the difference of a life lost or saved.

Rule 1. Lose no time in recovering the body from the water. Always try to save life; for while ten minutes is usually the limit, persons have been saved after being under water for 30 or 40 minutes. Do not lose time in taking the body to a place of shelter. Begin the life saving work at once.

Rule 2. Promptly, and without a moment's delay turn the individual upon his stomach on the shore or other land. Place the face turned to one side so that the nose and mouth are clear and unobstructed.



FIG. No. 1.

Rule 3. Kneel by the side of, or astride the hips of the victim, face toward his head. Place both outspread hands upon the small of the back, just over the shortest ribs, and with the arms straight pitch the weight of your body and shoulders forward, the pressure being downward and slightly forward. Thus exert pressure three seconds. [See Fig. 1]

Rule 4. Swing backward, suddenly releasing pressure, but keeping the hands in place. Rest two seconds. [See Fig. 2.]

Rule 5. Repeat pressure three seconds, and release two seconds, so that the artificial emptying of the lungs, and refilling of them may be at the rate of twelve times a minute.

This method, called the prone pressure method or the Schaefer method of resuscitation, at once expels water and restores the mechanical movements which are present in the act of natural respiration. The hands grasping the lower portion of the chest and carefully placed over the two lowest, the

floating ribs, throws upward the abdominal organs against the diaphragm, and that in turn expels the contents of the lungs. Then by the relaxation of the pressure for two seconds, the natural elasticity of the chest walls causes the chest to expand, and the air rushes in to fill the lungs.



FIG. NO. 2.

When only one person is present his whole time should be given to artificial respiration. That is the one important thing. If there is a second person, have him see that the victim's mouth is free from gum, tobacco, false teeth, blood or mucus. He should see that the tongue is forward and that nothing constricts the neck.

After breathing has commenced, restore the animal heat. Wrap him in warm blankets, apply bottles of hot water, hot bricks, or anything to restore heat. Warm the head nearly as fast as the body, lest convulsions come on. Rubbing the body with warm cloths or the hand, and slapping the fleshy parts may assist to restore warmth, and the breathing also.

Beware.

Avoid delay. A moment may turn the scales for life or death. Dry ground, shelter, warmth, stimulants, etc., at this moment are nothing,—artificial breathing is everything,—is the one remedy,—all others are secondary.

Do not stop to remove wet clothing before efforts are made to restore breathing. Give all your attention and effort to restore breathing by forcing air into and out of the lungs.

Before natural breathing is fully restored, do not let the patient lie on his back unless some person holds the tongue forward. The tongue by falling back may close the windpipe and cause fatal choking.

Prevent friends from crowding around the patient and excluding fresh air; also from trying to give stimulants before the patient can swallow. The first causes suffocation; the second, fatal choking.

Do not give up too soon. You are working for life. Any time within two hours you may be on the very threshold of success without there being any sign of it.

In suffocation with smoke, any poisonous gas, by electric shock, or by hanging,—proceed the same as for drowning, omitting effort to expel water, etc., from the windpipe.